U.S. Envronmental Protection Agency
Office of Solid Waste

Background Press Information

Municipal Solid Waste Reduction: Can Communities Afford It?

Comparing costs between communities is difficult because of different wage rates, different population densities and traffic patterns, different service levels, and a host of other factors which are rarely comparable. To overcome this difficulty yet still address costs, comparisons can be made with an earlier time in the same community when less waste reduction took place . (*Cutting the Waste Stream in Half: Community Record-Setters Show How*, EPA-530-R-99-013, June 1999, EPA-530-F-99-017, October 1999. www.epa.gov/osw.)

Dover, New Hampshire increased waste reduction from 3 percent in 1990 to 52 percent in 1996 while cutting cost per household per year from $122 in 1990 to $73 per household in 1996. Seattle, Washington increased waste reduction from 19 percent in 1987 to 49 percent in 1996 while holding cost per household constant at $155 per year. Portland, Oregon increased waste reduction from 29 percent in 1992 to 40 percent in 1996 while decreasing cost per household from $241 in 1992 to $211 in 1996. Falls Church, Virginia increased waste reduction from 39 percent in 1990 to 65 percent in 1996 while cutting cost per household from $372 to $215 per year. Perhaps the question should be whether communities can afford not to look closely at increasing waste reduction levels.

Keys to Cost-Effective MSW Reduction

A common thread in record-setting communities is considering waste reduction a primary waste management strategy. Recycling and composting are not treated as add-ons; rather, they are an integral part of the communities' waste management systems.

- **Maximize diversion levels**
  High diversion levels can significantly reduce landfill or other disposal costs and eliminate some trash routes and their associated costs. High waste diversion allows Madison, Wisconsin to serve 10,000 more households with fewer and smaller trash trucks. The smaller trucks cost less and have lower maintenance costs. Since Worcester, Massachusetts, began recycling, the city decreased trash crew size from 3 to 2 and the number of collection routes from 11 to 9.

- **Composting Programs**
  Yard trimmings collection and processing costs tend to be lower than recycling collection and processing costs because the material is homogeneous and needs less expensive, low-tech processing.
  In Bellevue, Washington, one-third of residential waste is composted. Bellevue residents spend about $102 per ton for composting compared to $139 per ton for recycling.
  Chatham, New Jersey, keeps its composting program costs low by hosting a regional compost facility in return for free tipping of its grass clippings. Chatham also avoids capital outlays for yard debris recovery by leasing county equipment as needed.

- **Implement pay-as-you-throw programs**
  In communities with pay-as-you-throw (PAYT) trash fees, trash per household decreases. Dover, New

Hampshire, instituted its PAYT system in 1991, the same year it began weekly curbside recycling. Between 1990 and 1996, per household trash fell from 6 to 2.3 pounds per day. Dover's net residential solid waste management costs dropped from $1.1 million in 1990 to $798,000 while adding more than 1,000 customers. Per household costs have decreased from $122 per year in 1990 to $73 per year in 1996.

- **Augment curbside with drop-off sites**
  While curbside collection is critical to maximizing participation and therefore recovery levels, drop-off collection is generally cheaper for the community. In 1996, St. Paul, Minnesota, avoided $75,000 in disposal fees and diverted 1,800 tons of material by offering residents drop-off opportunities for bulky goods from sofas and computers to skis. In Ann Arbor, Michigan, a comprehensive drop-off center accepts materials not collected at curbside (such as building materials, hardcover books, and appliances). Their costs to collect materials through drop-off are $14 per ton cheaper than through curbside collection. Drop-off increased Ann Arbor's waste reduction level by 3 percent. PAYT systems may also encourage the use of drop-off sites. In Dover, New Hampshire, drop-off collection accounted for 19 percent of all materials recovered. Their costs to collect and process drop-off materials average $14 per ton, compared to $77 per ton for curbside collection and processing of recyclables and yard debris.

- **Contracts**
  Consider reviewing contracts to assure that incentives to maximize recycling and assure community participation in recycling materials that can be sold at favorable prices are in place.

- **Review collection costs**
  – Collection frequency-less is often best
  – Automation: making collection faster and easier
  – Dual collection: one truck, two waste streams
  – Crew productivity: motivating employees
  – Contracting: competition and collection costs
  – Collection change: communicating to build support

  (*Collection Efficiency: Strategies for Success*, EPA-530-K-99-007, December 1999, *Getting More for Less: Improving Collection Efficiency*, EPA-530-R-99-038, November 1999, www.epa.gov/osw)